

DOCKET NO. 50-213

HADDAM NECK PLANT

OPERATOR REQUALIFICATION PROGRAM

8008260 590

JULY, 1980

CONNECTICUT YANKEE TRAINING PROGRAM

Program I.D.: OP-REQ Rev. 1

Approved: *James H. Ryan*

Date: 7-23-8

TITLE	Connecticut Yankee Reactor Operator Requalification
OBJECTIVE	Assure continued competence of Reactor Operators
EVALUATION	See Content, Section 4.0
CONTENT	1.0 LECTURES A lecture series, consisting of at least six lectures per year addressing the following topics, will be attended by all licensed personnel. 1.1 Reactor Theory 1.2 Operating Characteristics 1.3 Instrumentation and Control System 1.4 Protection and Safety Systems 1.5 Normal and Emergency Procedures 1.6 Radiation Control and Safety 1.7 Fluid Flow and Pump Theory 1.8 Thermodynamics 1.9 Operation with a Damaged Core Technical Specifications will be included where applicable. Video tapes or other commercially available training programs will be limited to less than 25 percent of the total lecture series.

2.0 On-THE-JOB TRAINING

On-the-job training consists of the following three categories.

2.1 Review of Changes

All Licensed Reactor Operators will review pertinent changes to the following:

- 2.1.1 Operating License
- 2.1.2 Normal Operating Procedures
- 2.1.3 Emergency Procedures
- 2.1.4 Surveillance Procedures
- 2.1.5 Technical Specifications
- 2.1.6 Plant Design

Review requirements will be established by the Plant Operations Review Committee.

2.2 Review of Emergency Procedures

All Emergency Procedures will be scheduled for annual review.

2.3 Reactor Control Manipulations

Reactor Control Manipulations, that demonstrate satisfactory understanding of reactor operation and provide for at least ten significant reactivity changes, must be experienced during each requalification period. An effort will be made to insure a variety of reactivity changes will be experienced.

A power transient is any power change other than adjustments for burnup.

This portion of On the Job Training may be satisfied by an approved simulator program.

Significant reactivity changes are identified as:

- *2.3.1 Reactor critical approach during which neutron level is brought to the point of adding heat.
- *2.3.2 Orderly reactor shutdown.
- *2.3.3 Dilution during power transient.
- *2.3.4 Boration during power transient.
- *2.3.5 Manual rod control during power transient.
- *2.3.6 Turbine control during phasing.

- *2.3.7 Manual feedwater control during startup or shutdown.
- *2.3.8 Loss of coolant including:
 - 1. significant PWR steam generator leaks
 - 2. inside and outside primary containment
 - 3. large and small, including leak-rate determination
 - 4. saturated Reactor Coolant response (PWR)
- *2.3.9 Loss of all feedwater (normal and emergency).
- *2.3.10 Loss of Reactor coolant flow/natural circulation.
- 2.3.11 Loss of condenser vacuum.
- 2.3.12 Loss of service water if required for safety.
- 2.3.13 Loss of shutdown cooling.
- 2.3.14 Loss of component cooling system or cooling to an individual component.
- 2.3.15 Loss of normal feedwater or normal feedwater system failure.
- 2.3.16 Loss of all feedwater (normal and emergency).
- 2.3.17 Loss of protective system channel.
- 2.3.18 Mispositioned control rod or rods (or rod drops).
- 2.3.19 Inability to drive control rods.
- 2.3.20 Conditions requiring use of emergency boration.
- 2.3.21 Fuel cladding failure or high activity in reactor coolant.
- 2.3.22 Turbine trip.
- 2.3.23 Malfunction of reactor coolant pressure/volume control system.
- 2.3.24 Reactor Trip.
- 2.3.25 Main steam line break (inside or outside containment).
- 2.3.26 Nuclear instrumentation failure(s).

*Indicates items that shall be experienced annually.

3.0 Simulator

A simulator program, of at least three days duration, may be used to meet Section 2.3 of On the Job Training.

The simulator must meet the following criteria:

- 3.1 Nuclear Regulatory Commission approved.
- 3.2 Simulates Connecticut Yankee Operating Characteristics.
- 3.3 Provide the control manipulations required.

4.0 Evaluation

4.1 Exams

A written exam, similar to the Nuclear Regulatory Commission License Exam, will be administered annually.

Exams will be evaluated to identify deficiencies which will be factored into future retraining lectures.

An overall score of less than 80 percent or less than 70 percent in each category on the annual exam will result in the individual being relieved of licensed duties and provided with acceleration training in the deficient areas.

4.2 Quizzes

Quizzes will be administered to evaluate student progress in lecture material.

A score of less than 80 percent will be evaluated and specific training administered to upgrade the individual. The lecture will be rescheduled if more than 50 percent of the attendees scored less than 80 percent.

4.3 Drills

Drills will be conducted at least annually to provide a systematic review of the operator's ability to respond to emergency conditions.

4.4 Exemptions

Instructors will be exempt from evaluation based on their participation in the preparation and administration of the evaluations.

5.0 Accelerated Programs

Accelerated programs will be developed for individuals failing to meet the requirements of Section 4.0.

6.0 Records

- 6.1 Records will be maintained that document attendance and satisfactory performance of all phases of this program.
- 6.2 Masters and keys of all exams and quizzes will be maintained on file.
- 6.3 Copies of each operators response to exam and quiz questions will be maintained on file.
- 6.4 Drill evaluations will be maintained on file.

CONNECTICUT YANKEE TRAINING ABSTRACT

Program I.D.: TC-TR 03

Approved: *R. H. H. H.*

Date: 7-22-80

TITLE	Instructor Requalification
DEVELOPED FOR	Connecticut Yankee Instrcutors responsible for classroom instruction of plant systems or operation for licensed reactor operators, reactor operator license candidates or shift technical advisors.
OBJECTIVE	Maintain the instructors knowledge of plant design and administrative controls current. NOTE: Satisfies requirement stated in Attachment One (Section 2e) of NRC (Denton) letter dated March 28, 1980, Subject: Qualifications of Reactor Operators.
LENGTH	N/A
SCHEDULE	Continuous
TYPE	Self Study
EVALUATION	N/A
CONTENT	1.0 Operating Experience 2.0 Plant Design 3.0 Changes

CONNECTICUT YANKEE TRAINING PROGRAM

Program I.D.: TC-TR 03

Approved: *[Signature]*

Date: 7-22-81

TITLE	INSTRUCTOR REQUALIFICATION
OBJECTIVE	Maintain instructors knowledge of operating history and changes to plant equipment, systems and administrative controls.
EVALUATION	N/A
CONTENT	1.0 Operating Experience 1.1 Monthly Review of "Operating Experiences Summary" 1.2 Plant Information Reports 1.3 Plant Licensee Event Report 1.4 Morning Meeting Report 1.5 Plant Operation Review Committee Minutes 1.6 Monthly Operating Report 2.0 Plant Design 2.1 Plant Design Change Request Review 3.0 Changes 3.1 Facility License 3.2 Plant Procedures Manual 3.3 Technical Specifications 3.4 Facility Description and Safety Analysis 3.5 Station Policies 3.6 Code of Federal Regulations